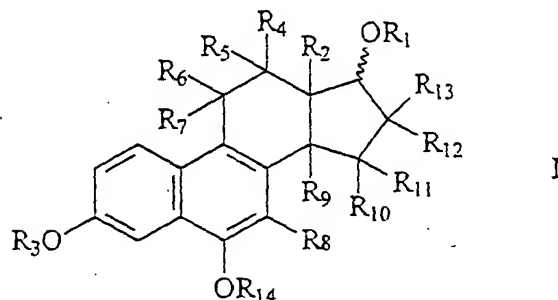


## NOVEL ESTROGENIC COMPOUNDS

### Abstract of the Disclosure

Novel estrogenic compounds of Formula I are provided.



- 110 wherein the bond represented by the wavy line may be a single or double bond such that when the wavy line is a single bond,  $R_1$  is selected from the group consisting of hydrogen, sulfate and glucuronate or other esters, and when the wavy line is a double bond,  $R_1$  does not exist;  $R_2$  is lower alkyl;  $R_3$  may be selected from the group consisting of hydrogen, sulfate, or glucuronide or other esters; and  $R_4$  through  $R_{13}$  may independently be selected
- 115 from the group consisting of hydrogen, hydroxy, ketone, lower alkyl, lower alkoxy, halogen, and carbonyl groups and  $R_{14}$  is selected from the group consisting of hydrogen, sulfate and glucuronide and other esters. When  $R_1$  is hydroxy, the hydroxy or ester substituent may have either an  $\alpha$  or a  $\beta$  orientation. Compositions of matter including compounds of the present invention are also provided as are methods of treating
- 120 mammals in need of treatment using compounds of the present invention.